HWG | HARRIS, WILTSHIRE & GRANNIS LLP

February 7, 2017

Ex Parte

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: *Universal Service Reform – Mobility Fund*, WT Docket No. 10-208

Dear Ms. Dortch:

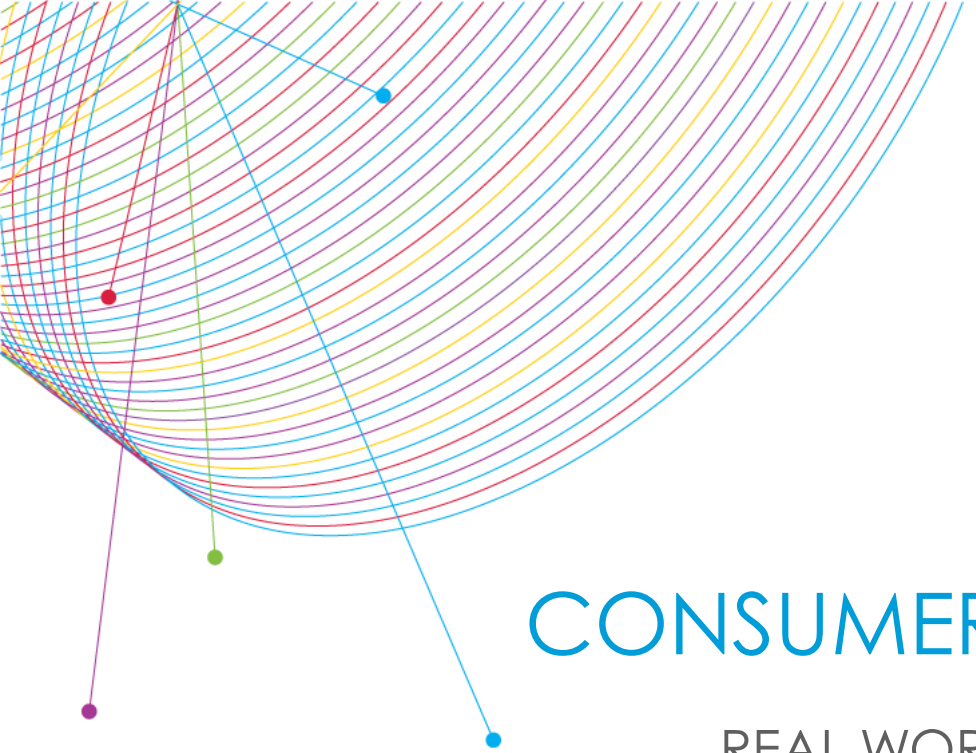
On February 3, 2017, Joby Fortson and Tom Jenkins of Nielsen Holdings plc ("Nielsen") and Elizabeth Uzelac and I from Harris, Wiltshire & Grannis LLP met with Jay Schwarz, Acting Wireline Advisor to Chairman Pai, and Rachael Bender, Acting Wireless Advisor to Chairman Pai. Mr. Jenkins participated by telephone. In that meeting, Nielsen discussed the attached presentation. We urged the Commission not to craft any Mobility Fund Phase II challenge process in a way that would exclude the use of Nielsen data as a source of evidence to verify or dispute the presence of LTE (or any other technology) in a particular area.

Should you have any questions, please communicate with me at (202) 730-1311 or jveach@hwglaw.com.

Sincerely,

Julie A. Veach
Counsel to Nielsen Holdings plc

cc: Jay Schwarz
Rachael Bender



nielsen

CONSUMER MOBILE COVERAGE

REAL WORLD MOBILE NETWORK COVERAGE MEASURED BY CONSUMERS 24X7

February 3, 2017

4 WAYS TO MEASURE MOBILE

3 USED BY NIELSEN TODAY

Active/Scripted Testing

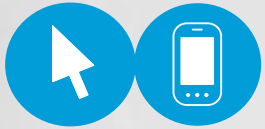
User or Testing company actively tests the network. Performs predefined tasks.

Upload/Download/Voice Calls – Attempt to simulate consumer behavior and mobile experience. Fixed file sizes, types of files and test scripts.

Drive Test

Advantages:
Voice and data
Identical tests
Ultra-detailed metrics
Controlled/repeated area

Disadvantages:
2x to 3x per year
Limited scripts/tests
1 device per operator
Limited time of day
Limited locations
Limited operators



User Activated

CLICK: Begin Test Now

Advantages:
Anywhere user desires
Anytime desired
Multiple devices

Disadvantages
Huge file sizes (data use)
No/limited app results
No voice results
Low quantity of results
Operators can identify

Background Activated

Automatically Test Periodically

Advantages:
Collects everywhere
Collects anytime
Controlled tests (same)
Multiple devices

Disadvantages
Med/large files (data use)
No/limited app results
No voice results
Operators can identify

Passive/Unscripted Testing

Results are based on what consumers do on their own for all calls, data uploads/downloads, wifi connections, and apps.

No scripts used. Only real results from actual consumers.

Consumer Uses Device Normally

Advantages:
Actual consumer experience
Collection 24x7 (billions of points)
All applications collected
Speed/throughput
Voice collection (inc. VoLTE)
Coverage
Collects everywhere/location
Multiple devices
Minimal extra data use
All operators
Operators can't identify

Disadvantages
No controlled tests
Tests not standardized
Less detailed metrics

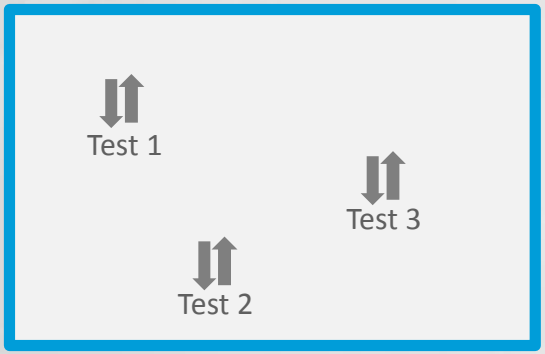
THE UNIQUE POWER OF NMP PASSIVE

Goal: To understand LTE experience in a specific Census Block

Active Tests

(from consumer app test, operator app test, or drive test)

Census Block 1



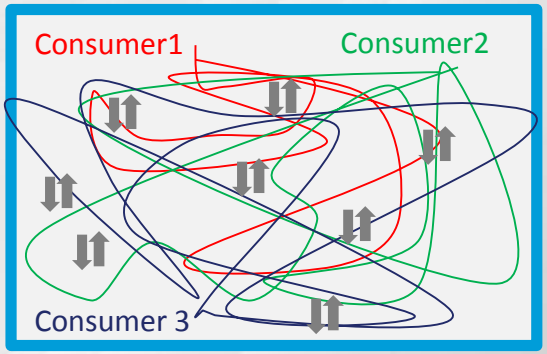
- 3 tests @ 10 seconds to 10 minutes each = 30 seconds to 30 minutes of testing
- Does not reflect actual consumer experience/use (big file test)
- Point in time
- Non-random locations/times

Vs

Passive Tests

(from consumer app)

Census Block 1



- 3 consumers @ 1440 minutes/day/person = 4,340 minutes of coverage results/day
- More data speed results where consumers use device
- Throughout the day, week, month
- Everywhere consumers go

NIELSEN MOBILE PERFORMANCE

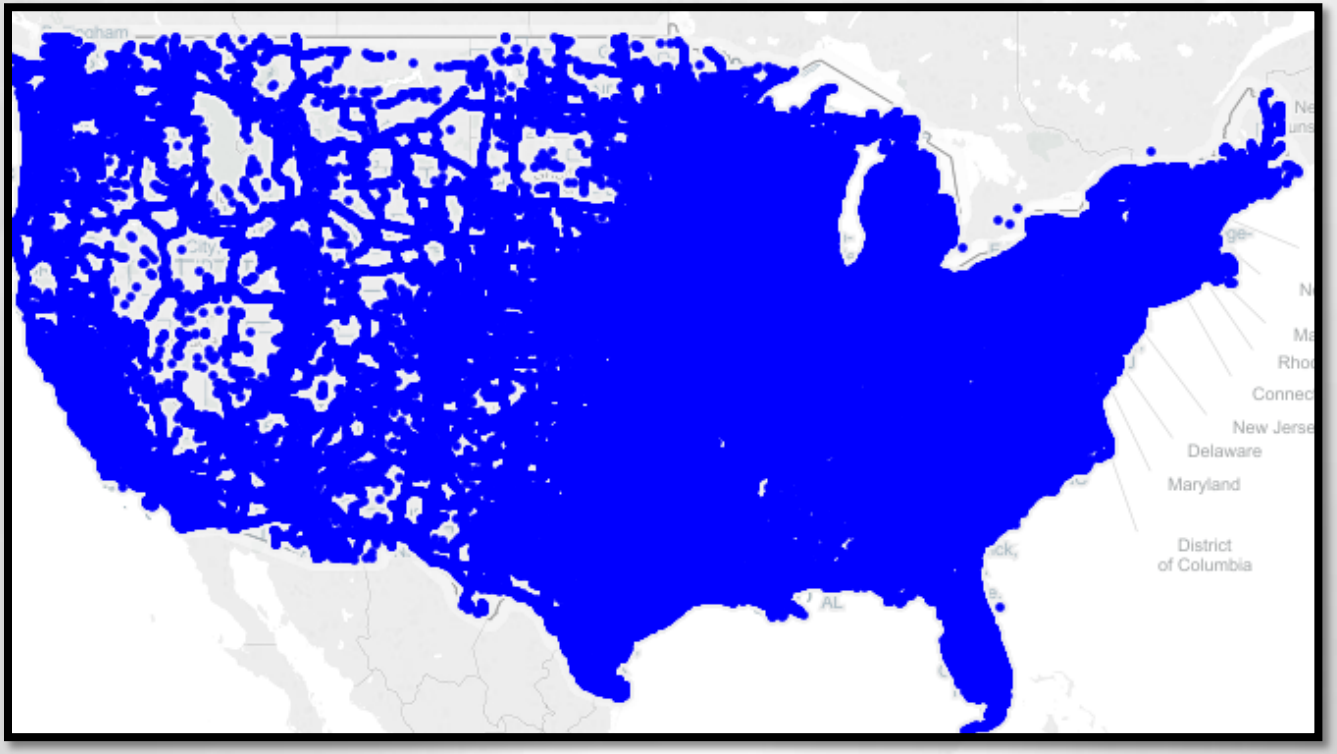
Passive/Unscripted Testing

- Passive measurement of the mobile consumer's actual experience, 24/7.
  - More than 70,000 panelists
  - More than 500,000,000 real consumer experiences
  - More than 100,000,000 hours of results
  - When, where and how consumers use their devices
  - Measures:
    - Coverage (24x7) of 2G/3G/4G and No Service
    - Signal strength
    - Data speeds
    - Time of day and device location

How can NMP passive/unscripted data be used?

- Nielsen Mobile Performance can:
  - Reflect presence or lack of LTE in any area of the US based on parameters of the customer's choosing (e.g., signal strength, data speeds)
  - Report for any operator or group of operators
  - Report at any level of granularity down to 5 meters (e.g., county, zip code, census block, 100M, 50M)
  - Report timely, up-to-date results
- Results are available in aggregate or by carrier. Different carriers have LTE coverage gaps in different locations.

NATIONWIDE RESULTS – EVERYWHERE CONSUMERS GO

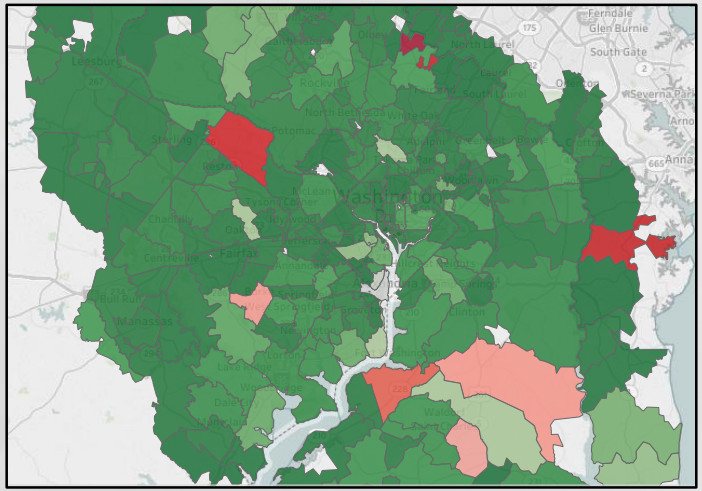


Nielsen Mobile Performance results are available in the areas shown in blue. And, if results are not already available in a particular neighborhood, Nielsen can initiate the collection of data for any public location in the US within 7 days.

LOCAL AND HYPER-LOCAL RESULTS

Urban Area: Washington, DC

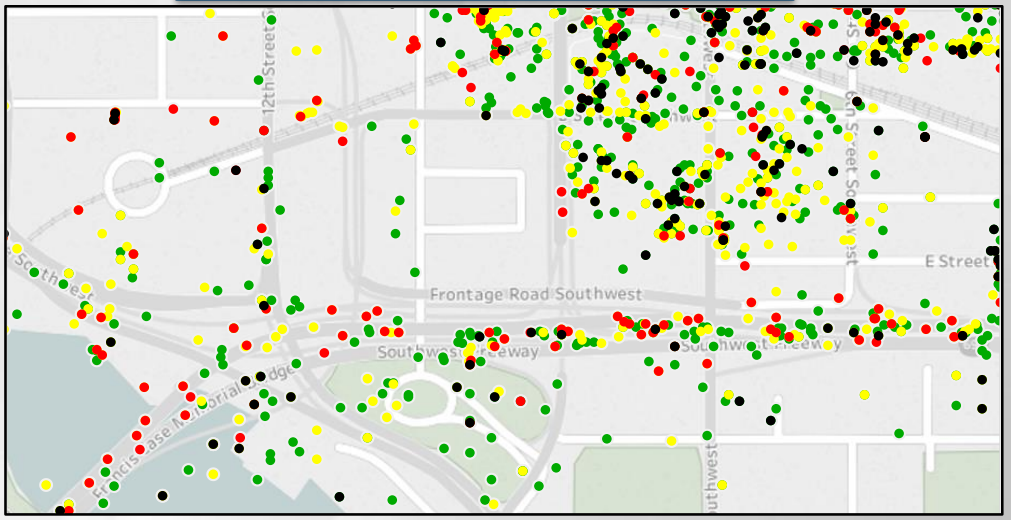
% LTE Service Results By Zip Code



Low/No LTE Service

Strong LTE Service

Exact locations where consumers lost and gained coverage



No Service

Homing 3G

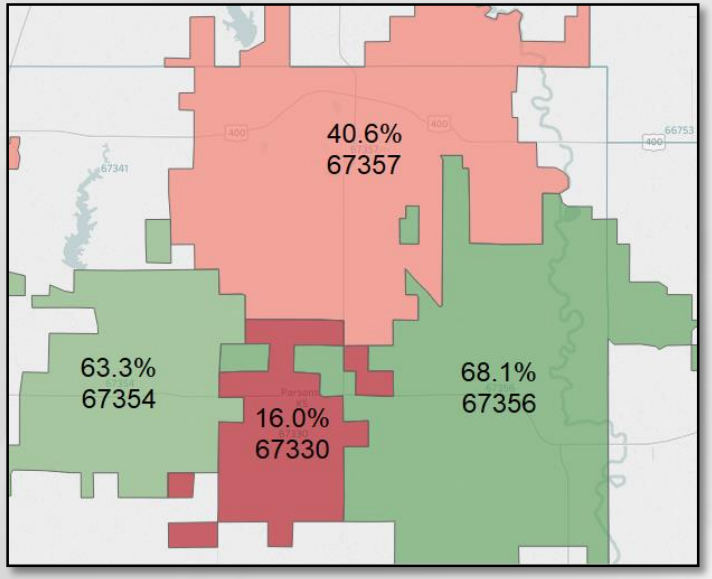
Homing 2G

Homing 4G

LOCAL AND HYPER-LOCAL RESULTS

Rural Area: Parsons, KS

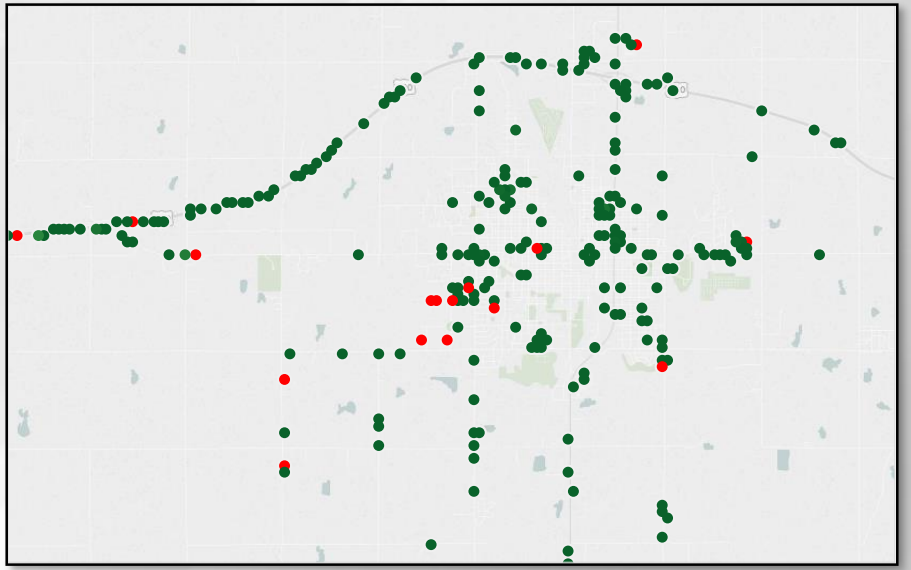
% LTE Service Results By Zip Code

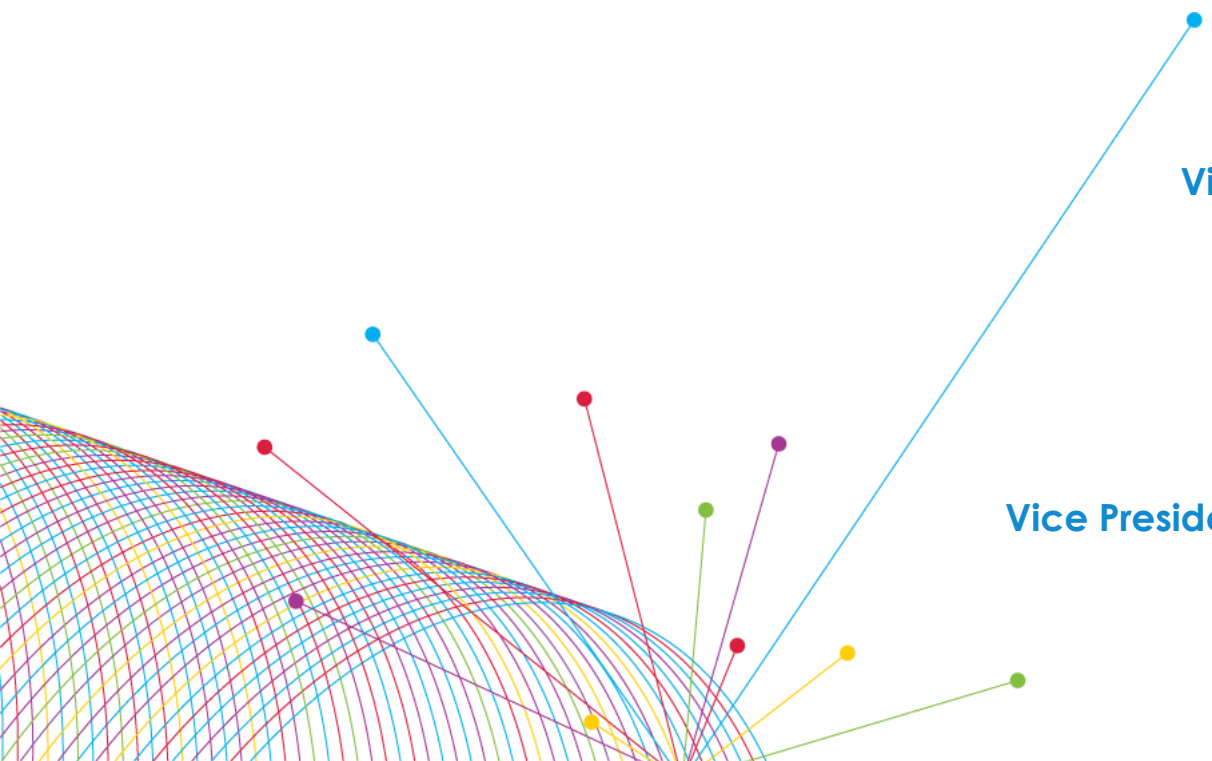


Low/No LTE Service

Strong LTE Service

Locations where LTE was prevalent vs less strong





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AN UNCOMMON SENSE
OF THE CONSUMER™

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